Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☐ Responsive to communication(s) filed on *10 November 2000* .

2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *1-11* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-11* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved  b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

   a) ☒ All  b) ☐ Some * c) ☐ None of:

   1. ☒ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

**Attachment(s)**

15) ☐ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: .

# DETAILED ACTION

1.    This action is responsive to communications: Amendment, filed on 11/10/00. This

action is final.

2.    Claims 1-11 are pending in this application. Claim 1 is independent claim. In the

Pre-Amendment filed on 7/17/00, claims 1, 4 and 11 were amended.

    This application claims foreign priority dated 7/17/97.

3.    The present title of the invention is "Graphic Image Texture Generation" as filed

originally.

## *Claim Rejections - 35 USC § 103*

4.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.    Claims 1-4, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kamen et al. (5,812,141).

    As per claim 1, Kamen et al., hereinafter Kamen, disclose an apparatus for

texture mapping, as illustrated at Figure 4, using a predetermined set of standardized

textures (30). The apparatus has input (92) to receive data identifying one of the sets of

standardized textures, and means for processing the data (4). The texture mapping controller (90) would receive control signals (92) then determine the computation methods (column 6, line 26 – 36).

It is recognized that, in Figure 4, Kamen uses texture lookup table for texture determination, however, he also discloses in column 2, line 31 – 39 that the texture can also be derived by the means of procedural texturing.

6.     As per claim 2, the input control signals are plural (column 10, line 14 – 18).

7.     As per claim 3, Kamen discloses his control signals include quality of texture (column 11, line 47 – 54).

8.     As per claim 4, Kamen discloses, in his texture mapping controller, a computation method selection device (column 10, line 31 – 49) to generate pixel value. It is obvious that his method can also be used to generating procedural textures of the standardized set.

9.     As per claim 7, it is notoriously known in the art (Officially noted) that a processor of many elements can be fabricated onto a single substrate for the purposes of increased processing speed and reducing power and cost.

10.    As per claim 9, the input to Kamen's apparatus (Figure 4; 42) are lines and polygons (column 6, line 25 – 26). Since Kamen talks about texture in terms of "viewpoint", "perspectives" and "coordinate space" (column 1, lines 45 and 60), it is obvious that Kamen is talking about 3-dimensional polygons. Kamen also discloses means to convert 3-D data into 2-D (Figure 4; 2, 3), program command (Figure 4; select

signal), and rendering means (Figure 4; 34, 28 and 6) to generate an output image with texture applied.

11.     As per claim 10, it is well known in the art (Officially noted) that the polygon data and program commands can be stored in remote location and its location stored in a local memory to be retrieved at a later time.

12.     Claims 5-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamen et al. as applied to claims 1 above, and further in view of Griffin et al. (5,880,737).

As per claim 5, Kamen discloses a texture mapping apparatus with procedural texture and control signals. It is noted that Kamen does not disclose using a cache to store texture maps, however, this is known in the art as taught by Griffin et al., hereinafter Griffin. Griffin discloses that in order to reduce latency in memory accessing, textual samples can be stored in the texture cache (column 18, line 35 – 39).

It would have been obvious to one of ordinary skill in the art at the time of invention to include a texture cache as in Griffin into the invention of Kamen to reduce memory access latency.

13.     As per claim 6, Kamen discloses his texture mapping apparatus has control for texture quality (column 11, line 47 – 54). It is notoriously known in the art (Officially noted) to place an interpolator after the texture map for refining the texture quality.

14.     As per claim 8, it is notoriously known in the art (Officially noted) that a processor of many elements can be fabricated onto a single substrate for the purposes of increased processing speed and reducing power and cost.

15.    Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Kamen</u>

et al. as applied to claim 1 above, and further in view of <u>Tremblay</u> et al. (5,925,123).

As per claim 11, <u>Kamen</u> discloses an apparatus with texture rendering means

and control signals. It is noted that <u>Kamen</u> does not explicitly teaches the program

commands are transmitted over the network in virtual machine code and a processor to

convert the program commands to local machine codes, however, this is known in the

art as taught by <u>Tremblay</u> et al., hereinafter <u>Tremblay</u>. <u>Tremblay</u> discloses a processor

(Figure 6B; 635) to decode instruction transmitted over the network and convert it to

local machine code.

It would have been obvious to one of ordinary skill in the art at the time of

invention to include a processor locally as taught in <u>Tremblay</u> into the invention of

<u>Kamen</u> in order to translate the instructions into local machine code in a network

environment.


**Response to Arguments**


16.    Applicant's arguments filed 9/20/00 have been fully considered but they are not

persuasive.

The applicant argues that procedural texture are a set mathematical functions

selectable from the program commands which <u>Kamen</u> does not suggest. However, the

procedural textural does not actually perform the mathematical calculation but the

processor. Procedural textural is considered a set of instructions instructing the

processor to perform the calculation. Therefore, in order to perform the procedural

textural calculation, a set of program commands should be in place to select the

procedural textural to have the processor to perform the calculation.

## *Conclusion*

17.     Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action.  Accordingly, **THIS ACTION IS MADE FINAL**.  See MPEP

§ 706.07(a).  Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action.  In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action.  In no event, however, will the statutory period for reply expire later
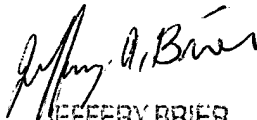
than SIX MONTHS from the date of this final action.

## *Inquiries*

18.    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ryan R Yang whose telephone number is (703) 308-

6133. The examiner can normally be reached on M-F 9:30AM-7:00PM Second Wed

Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Michael  Razavi can be reached on (703) 305-4713. The fax phone

numbers for the organization where this application or proceeding is assigned are (703)

308-6606 for regular communications and (703) 308-6606 for After Final

communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

4700.

JEFFERY BRIER
PRIMARY EXAMINER

Ryan Yang
December 21, 2000